

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>0000054631</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/006164</b>	International filing date (day/month/year) <b>08.06.2004</b>	Priority date (day/month/year) <b>11.06.2003</b>
International Patent Classification (IPC) or national classification and IPC		
Applicant <b>BASF AKTIENGESELLSCHAFT</b>		

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
  - ☒ (sent to the applicant and to the International Bureau) a total of 7 sheets, as follows:
    - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - ☐ (sent to the International Bureau only) a total of \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
- This report contains indications relating to the following items:
 

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/006164

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
  - ☐ publication of the international application (Rule 12.4)
  - ☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

- ☐ the international application as originally filed/furnished

- ☒ the description:

pages 1-21 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- ☒ the claims:

nos. 11 (in part) as originally filed/furnished

nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19

nos.\* 1-10, 11 (in part) received by this Authority on 05.04.2005 with letter of 01.04.2005

nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- ☐ the drawings:

sheets \_\_\_\_\_ as originally filed/furnished

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (specify): \_\_\_\_\_

☐ any table(s) related to sequence listing (specify): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (specify): \_\_\_\_\_

☐ any table(s) related to sequence listing (specify): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-11	YES
	Claims		NO
Inventive step (IS)	Claims	1-11	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

1. The invention relates to the use of quinaldine and naphthalidine derivatives as crystallisation modifiers.

2. Reference is made to the following documents:

D1: WO 02/00643 A (cited in the application)  
D2: DE 17 70 960 A (cited in the application)  
D3: EP-A-1 138 723  
D4: DE 26 38 528 A

3. Novelty

Document D1 describes the use of compounds of Formula I, where X is a group of Formula IIa and also Y is a group of Formula IIB, as crystallisation modifiers for organic pigments (claims 1 and 3).

Document D2 describes quinophthalone pigments such as C.I. Pigment Yellow 138.

Document D3 describes compounds of Formula I which are hydroxy-substituted in the 3-position, and the use of such compounds in printing inks.

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Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

Document D4 describes compounds of Formula I and their use for colouring polymer materials.

None of the prior art documents describe the use of compounds of general Formula I where either X is a group of Formula IIa or Y is a group of Formula IIB. Claims 1 to 3 therefore meet the requirement of PCT Article 33(2).

None of the prior art documents describe a method for converting organic raw pigments into fine-grained pigments in the presence of a compound of Formula I. Claims 4 to 8 therefore meet the requirement of PCT Article 33(2).

None of the prior art documents describe a pigment preparation containing at least one organic pigment and at least one compound of Formula I. Claims 9 and 10 therefore meet the requirement of PCT Article 33(2).

None of the prior art documents describe a compound of Formula I'. Claim 11 therefore meets the requirement of PCT Article 33(2).

4. Inventive step

The problem addressed by the present invention is that of providing crystallisation modifiers which are not produced in an additional reaction stage following pigment synthesis. The applicant's solution involves providing crystallisation modifiers in the form of

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quinaline derivatives that have only one of the cyclic groups, namely either a 3-hydroxyindene-1-on-2-yl group or a phthalimidyl group. The idea that compounds containing only a part of the molecular structure of the pigment could be suitable for advantageously influencing crystallisation, particularly of quinophthalone pigments, is neither known from nor derivable from the prior art. The invention therefore meets the requirement of PCT Article 33(3).